. Application/Control Number: 09/837,190 Art Unit: 2600

Clmpto Klv 04/19/01 Application/Control Number: 09/837,190
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- 1. A real time recording/reproducing system for converting an analog image signal in an analog-to-digital converter (ADC) to digital data, recording the digital data in a recorder, reading out the digital data recorded in the recorder and converting the read-out digital data in a digital-to-analog converter (DAC) to analog data to be outputted, the real time recording/reproducing system comprising:
- a first frame memory for storing the output of the ADC;
- a compression processing module for compressing the output of the first frame memory;
- a decompression processing module for decompressing the digital data read out from the recorder;
- a second frame memory for storing the output of the decompression processing module and outputting the stored data to the DAC; and
- a frame rate controller for controlling the compression processing module.
- 2. A real time recording/reproducing system for converting an analog image signal in an analog-to-digital converter (ADC) to digital data, recording the digital data in a recorder, reading out the digital data recorded in the recorder and converting the read-out digital data in a digital-to-analog converter (DAC) to analog data to be outputted, the real time recording/reproducing system comprising:

a first frame memory for storing the output of the $\ensuremath{\mathsf{ADC}}\xspace$;

a compression processing module for compressing the output of the first frame memory;

a decompression processing module for decompressing the digital data read out from the recorder;

a second frame memory for storing the output of the decompression processing module and outputting the stored data to the DAC; and

a frame rate controller for controlling the frame rate of the compression processing module to be constant by executing a frame interpolating processing. Application/Control Number: 09/837,190 Art Unit: 2600

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- 3. A real time recording/reproducing system for converting an analog image signal in an analog-to-digital converter (ADC) to digital data, recording the digital data in a recorder, reading out the digital data recorded in the recorder and converting the read-out digital data in a digital-to-analog converter (DAC) to analog data to be outputted, the real time recording/reproducing system comprising:
- a first frame memory for storing the output of the $\ensuremath{\mathsf{ADC}}$;
- a compression processing module for compressing the output of the first frame memory;
- a decompression processing module for decompressing the digital data read out from the recorder and executing a frame skipping processing when it becomes unable to execute full frame real time decompression processing;
- a second frame memory for storing the output of the decompression processing module and outputting the stored data to the DAC; and
- a frame rate controller for controlling the compression processing module.

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Claim 4 (amended). The real time recording/reproducing system according to [one of claims 1 to 3] claims, wherein the frame thinning-out in the decompression processing module and the frame skipping in the decompression processing module are performed preferentially from frame-interpolation frames to generate digital compressed data involving much motion.

Claim 5 (amended). The real time recording/reproducing system according to [one of claims 1 to 3] claim.], wherein the compression processing modules adds data bit stream data including a picture header representing the start of a frame compression code, a user data representing a thinned-out frame and a reference frame code representing the same frame as a reference frame.

6. A real time recording/reproducing system for recording a digital data in a recorder obtained by converting an analog image signal, and reproducing the recorded the digital data through in the analog data from at comprising steps of:

storing the digital data in a first frame memory; compressing the output of the first frame memory;

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decompressing the digital data read out from the recorder;

storing the decompressed data in a second memory; controlling the frame rate of the compressed data to be constant by executing a frame interpolating processing; and

executing a frame skipping processing when it becomes unable to execute full frame real time decompression processing.

- 7. The real time recording/reproducing system according to claim 6, wherein the frame thinning-out and the frame skipping operations are performed preferentially from frame-interpolation frames to generate digital compressed data involving much motion.
- 8. The real time recording/reproducing system according to claim 6, wherein in the compression processing operation data bit stream data including a picture header representing the start of a frame compression code, a user data representing a thinned-out frame and a reference frame code representing the same frame are addedas a reference frame.